A7V8X-MX SE

User Guide

Motherboard

E1493

First Edition V1

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Notices

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adpater or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

A7V8X-MX SE specification summary*

CPU	Socket A for AMD Athlon™XP up to 3200+ processor Thoroughbred/Barton core support
Chipset	VIA KM400 VIA VT8235 CE
Front Side Bus (FSB)	333/266/200 MHz
Memory	2 x 184-pin DDR DIMM sockets support up to maximum 2 GB unbuffered PC2700/2100/1600 non-ECC DDR SDRAM memory.
Expansion slots	3 x PCI 1 x AGP 8X/4X (0.8V or 1.5V only)
IDE	2 x UltraATA133/100/66/33
Graphics	Integrated VIA UniChrome™ Graphics
Audio	AD1980 6-channel AUDIO CODEC S/PDIF out interface
LAN	VIA VT6103 10/100 Mbps Ethernet PHY
Hardware monitoring	Super I/O integrated monitoring of CPU/chassis fan and MB/CPU temperature
Rear panel I/O ports	1 x Parallel 1 x Serial 1 x PS/2 keyboard 1 x PS/2 mouse 1 x RJ-45 port 1 x Audio I/O 1 x VGA 4 x USB 2.0/1.1
Internal connectors	1 x USB connector supports additional 2 USB 2.0 ports CPU/chassis FAN connectors Chassis intrusion connector 20-pin ATX power connector PANEL connector CD/AUX connectors S/PDIF Out connector GAME/MIDI connector Front panel audio connector
BIOS features	2Mb Flash EEPROM, Award BIOS, ACPI, DMI2.0, PnP features, TCAV, CrashFree BIOS

(continued next page)

A7V8X-MX SE specification summary*

Industry standard	PCI 2.2, USB 2.0/1.1
Manageability	WOL, WOR, chassis intrusion
Support CD contents	Device drivers ASUS PC Probe ASUS Screensaver Award BIOS Flash Utility Microsoft DirectX Adobe Acrobat Reader Trend Micro™ PC-cillin 2002
Accessories	User Guide ASUS A7V8X-MX SE support CD UltraATA cable FDD cable I/O shield
Form Factor	Micro-ATX form factor: 9.6 in x 9.6 in

** Specifications are subject to change without notice.*

About this guide

Conventions used in this guide

To make sure that you perform certain tasks properly, take note of the following symbols used throughout this guide.

WARNING. Information to prevent injury to yourself when trying to complete a task.

CAUTION. Information to prevent damage to the components when trying to complete a task.

IMPORTANT. Information that you MUST follow to complete a task.

NOTE. Tips and additional information to aid in completing a task.

Chapter 1

This chapter describes the features of the motherboard. It includes brief descriptions of the motherboard components, and illustrations of the layout, jumper settings, and connectors.

Product introduction

1.1 Welcome!

Thank you for buying the ASUS® A7V8X-MX SE motherboard!

The ASUS A7V8X-MX SE motherboard comes with the most advanced technologies to deliver maximum performance for Socket A processors. This motherboard is also packed with value-added features for guaranteed consumer satisfaction. The following sections provide important technical information about the motherboard for future upgrades or system reconfiguration.

Before you start installing the motherboard and hardware devices on it, check the items in your package with the list below.

1.2 Package contents

Check your ASUS A7V8X-MX SE package for the following items.

- ✓ ASUS A7V8X-MX SE motherboard.(Micro-ATX form factor: 9.6 in x 9.6 in)
- ✓ ASUS A7V8X-MX SE support CD
- ✓ 40-pin 80-conductor ribbon cable for UltraATA133 IDE drives
- ✓ Ribbon cable for a 3.5-inch floppy drive
- ✓ Bag of extra jumper caps
- ✓ I/O shield
- ✓ User Guide

1.3 Special features

333MHz FSB support for Athlon™ XP processors

The A7V8X-MX SE motherboard supports 333MHz front side bus frequency for Athlon™ XP processors allowing increased application program productivity and enhanced digital media experience. See page 1-10 for details.

AGP 8X support

AGP 8X (AGP 3.0) is the next generation VGA interface specification that enables enhanced graphics performance with high bandwidth speeds of up to 2.12 GB/s. See page 1-13 for details.

Integrated graphics

The A7V8X-MX SE motherboard comes with an integrated VIA Unichrome™ 2D/3D graphics core allowing efficient execution of multimedia applications and playback support for video and DVD.

Integrated 10/100 LAN

The A7V8X-MX SE motherboard comes with an onboard 10/100Mbps Fast Ethernet controller to give you a fast and reliable connection to a local area networks (LANs) and the Internet.

USB 2.0 technology

The motherboard implements the Universal Serial Bus (USB) 2.0 specification, dramatically increasing the connection speed from the 12 Mbps bandwidth on USB 1.1 to a fast 480 Mbps on USB 2.0. USB 2.0 is backward compatible with USB 1.1.

Digital audio support

A Sony/Philips Digital Interface (S/PDIF) connector is onboard to give you convenient connectivity to external home theater audio systems. The S/PDIF technology allows direct digital audio transfers keeping the best signal quality.

SoundMAX Digital Audio System

The SoundMax Digital Audio System is the industry's highest performance and most reliable audio solution for business professionals, audiophiles, musicians, and gamers. SoundMAX Digital Audio System can output 5.1 channel surround and features state-of-the-art DLS2 MIDI synthesizer with Yamaha DLSbyXG sound set, 5.1 Virtual Theater™ and supports all major game audio technologies including Microsoft DirectX™8.0, Microsoft DirectSound 3D™, A3D, MacroFX, ZoomFX, MultiDrive 5.1 and EAX.

ASUS C.O.P.

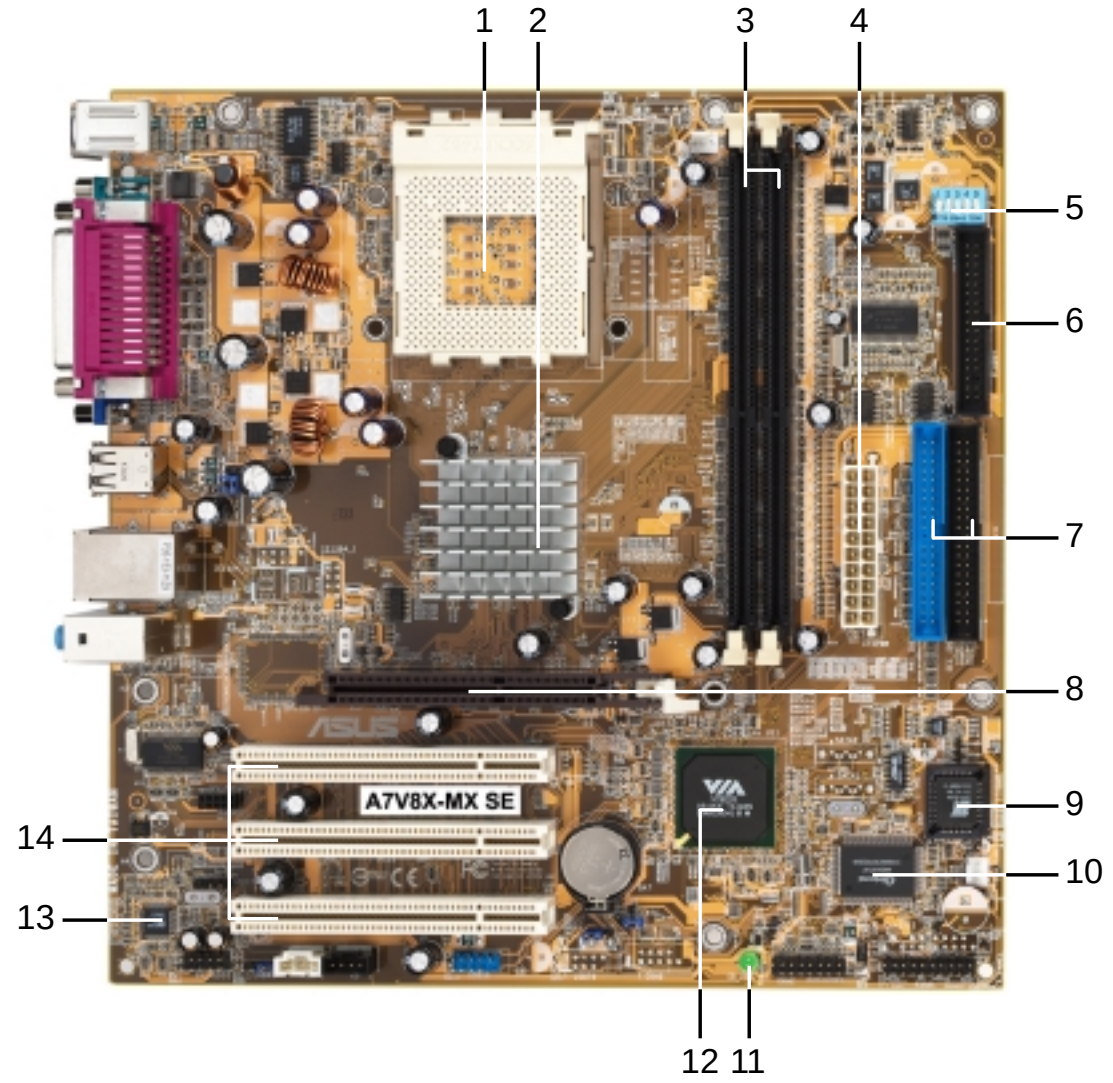
The ASUS C.O.P. (CPU Overheating Protection) is a hardware protection circuit that automatically shuts down the system power before temperatures go high enough to permanently damage the CPU.

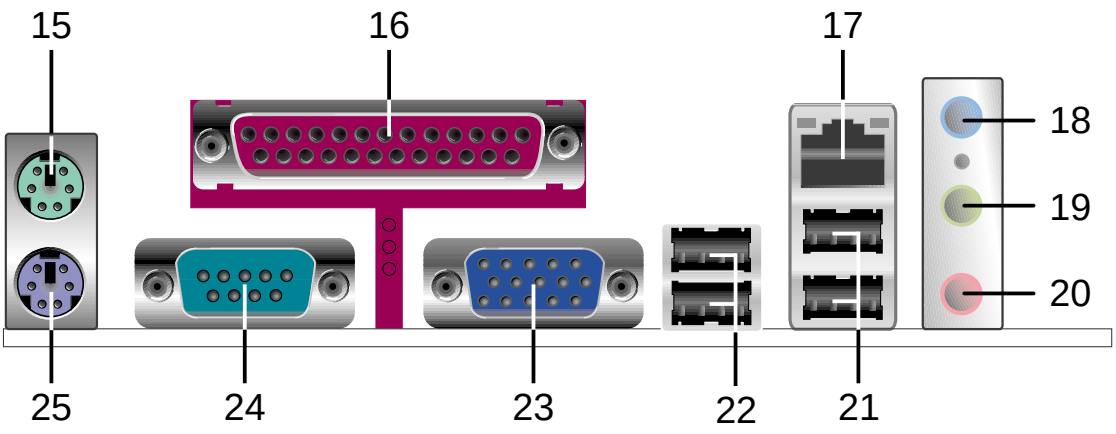
ASUS CrashFree BIOS

CrashFree BIOS allows users to restore BIOS data from a floppy disk even when BIOS code and data are corrupted. Users can now enjoy this feature without the need to buy a new ROM.

1.4 Motherboard components

Before you install the motherboard, learn about its major components and available features to facilitate the installation and future upgrades. Refer to the succeeding pages for the component descriptions.





1 **CPU socket.** Socket 462 (Socket A) Zero Insertion Force (ZIF) socket for AMD Athlon XP™ up to 3200+ processors.

2 **North bridge controller.** The VIA KM400 North bridge controller chipset supports a 64-bit DDR memory controller and up to 2 GB of 333/266/200MHz DDR memory. It also incorporates the fast HyperTransport™ link to the CPU and supports AGP 8X technology. VIA KM400 also features the VIA UniChrome™ 2D/3D graphics core for efficient multimedia applications including DVD and video playback.

3 **DDR DIMM sockets.** The motherboard comes with two Double Data Rate Dual Inline Memory Module (DDR DIMM) sockets to support up to 2GB of system memory. This memory architecture allows data transfer rates of up to 2.7 GB/s with PC2700 DDR DIMMs.

4 **ATX power connector.** This connects the standard 20-pin plug from the power supply unit. The power supply unit must have at least 1A on the +5V standby lead (+5VSB).

5 **DIP switches.** This 5-pin Dual Inline Package (DIP) switches allows you to select the CPU frequency multiple.

6 **Floppy disk drive connector.** This connects the provided ribbon cable for the floppy disk drive. One side of the connector is slotted to prevent incorrect insertion of the floppy disk drive cable.

7 **IDE connectors.** These dual-channel bus master IDE connectors support up to four UltraATA133, PIO Modes 0 ~ 4 IDE devices. Both the primary (blue) and secondary (black) connectors are slotted to prevent incorrect insertion of the IDE ribbon cable.

8 **AGP slot.** The Accelerated Graphics Port (AGP) slot supports 1.5V and 0.8V AGP 8X/4X mode AGP cards for graphics and multimedia applications.

9 **Flash EEPROM.** This 2Mb Firmware Hub contains the programmable BIOS program.

10 **Super I/O chipset.** The Winbond 83697HF I/O controller offers support for a variety of I/O functions including two high-speed UART compatible serial ports and one parallel port with EPP and ECP capabilities. The Super I/O controller also supports a floppy disk drive, Game/MIDI port, PS/2 keyboard, and PS/2 mouse.

11 **Onboard LED.** This onboard LED lights up if there is a standby power on the motherboard. This LED acts as a reminder to turn off the system power before plugging or unplugging devices.

12 **South bridge controller.** The VIA VT8235 CE integrated South bridge controller provides efficient bandwith requirements for PCI, USB and support for LAN devices. This controller also supports standard UltraATA133 IDE drives and provides separate data paths for each IDE channel. The controller supports six USB ports, one LAN port and is PCI 2.2 compliant. The VIA VT8235 communicates with the North bridge chip at rates of up to 533MB/s using the VIA 8X VLink Technology.

13 **Audio CODEC.** The ADI AD1980 6-channel Audio CODEC is AC'97 compliant and designed for PC multimedia systems.

14 **PCI slots.** These 32-bit PCI 2.2 expansion slots support bus master PCI cards such as SCSI and LAN cards. The PCI slots operates at up to 133MB/s maximum output.

15 **PS/2 mouse port.** This green 6-pin connector is for a PS/2 mouse.

16 **Parallel port.** This 25-pin port connects a parallel printer, a scanner, or other devices.

17 **RJ-45 port.** Using the South bridge integrated MAC and the VIA VT6103 LAN PHY Fast Ethernet controller, this port allows connection to a Local Area Network (LAN) through a network hub.

18 **Line In port.** This Line In (light blue) port connects a tape player or other audio sources. In a 6-channel mode, this port functions as Bass/Center.

19 **Line Out port.** This Line Out (lime) port connects a headphone or a speaker. In a 6-channel mode, this port functions as Front Speaker Out.

20 **Microphone port.** This Mic (pink) port connects a microphone. In a 6-channel mode, this port functions as Rear Speaker Out.

21 **USB 1 & 2 ports.** These two 4-pin Universal Serial Bus 2.0/1.1 ports are available for connecting USB devices such as mouse and PDA.

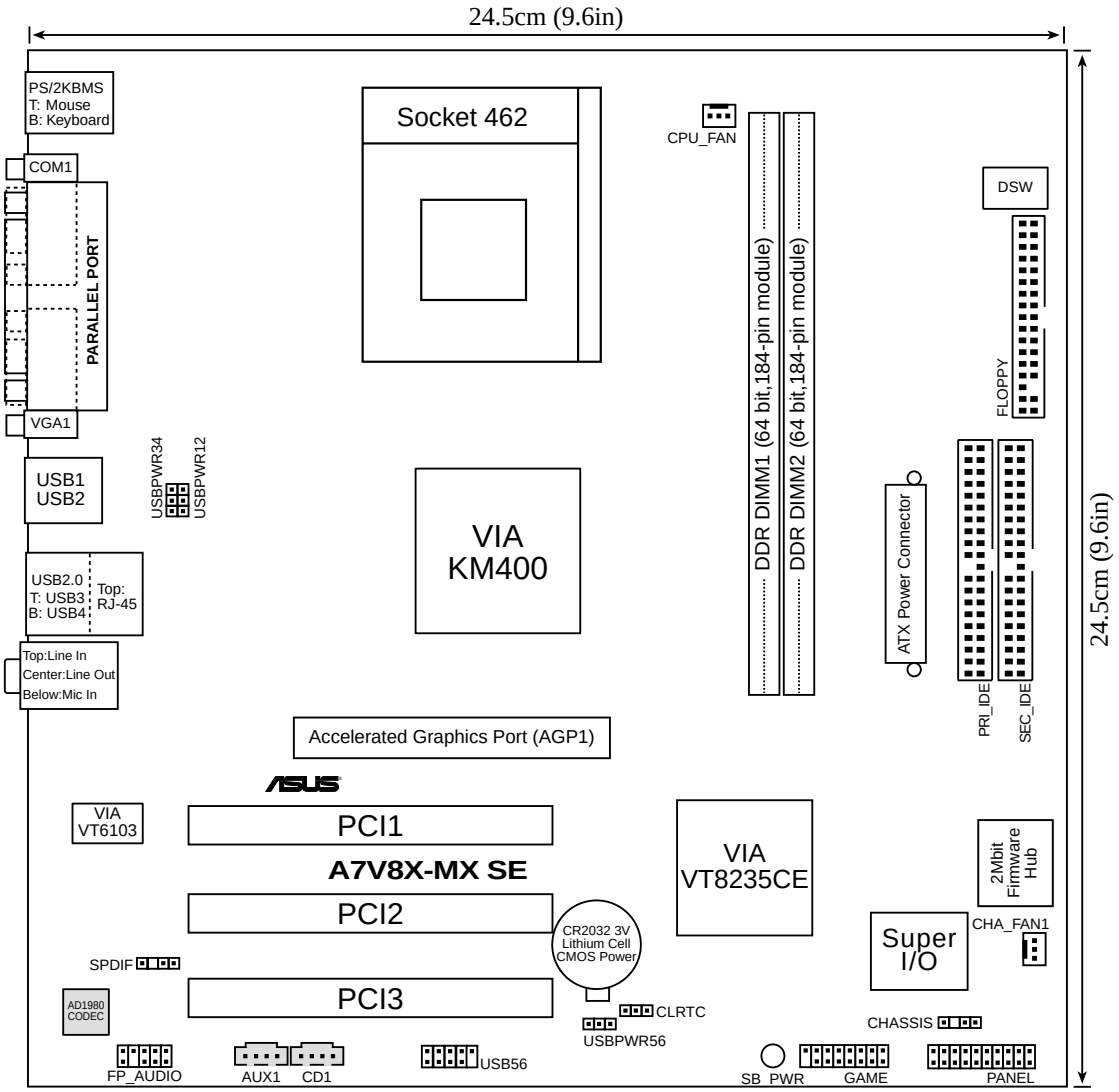
22 **USB 3 & 4 ports.** These two 4-pin Universal Serial Bus 2.0/1.1 ports are available for connecting USB devices such as mouse and PDA.

23 **VGA port.** This 15-pin VGA port connects to a VGA monitor.

24 **Serial port.** This port connects a serial mouse. modem or other serial devices.

25 **PS/2 keyboard port.** This purple 6-pin connector is for a PS/2 keyboard.

1.5 Motherboard layout



1.6 Motherboard installation

The A7V8X-MX SE uses the Micro ATX form factor, measuring 24.5 cm (9.6 in.) x 24.5 cm (9.6 in.) - a standard fit for most Micro ATX chassis.

WARNING! Unplug the power cord before installing the motherboard. Failure to do so may cause you physical injury and damage Motherboard components.

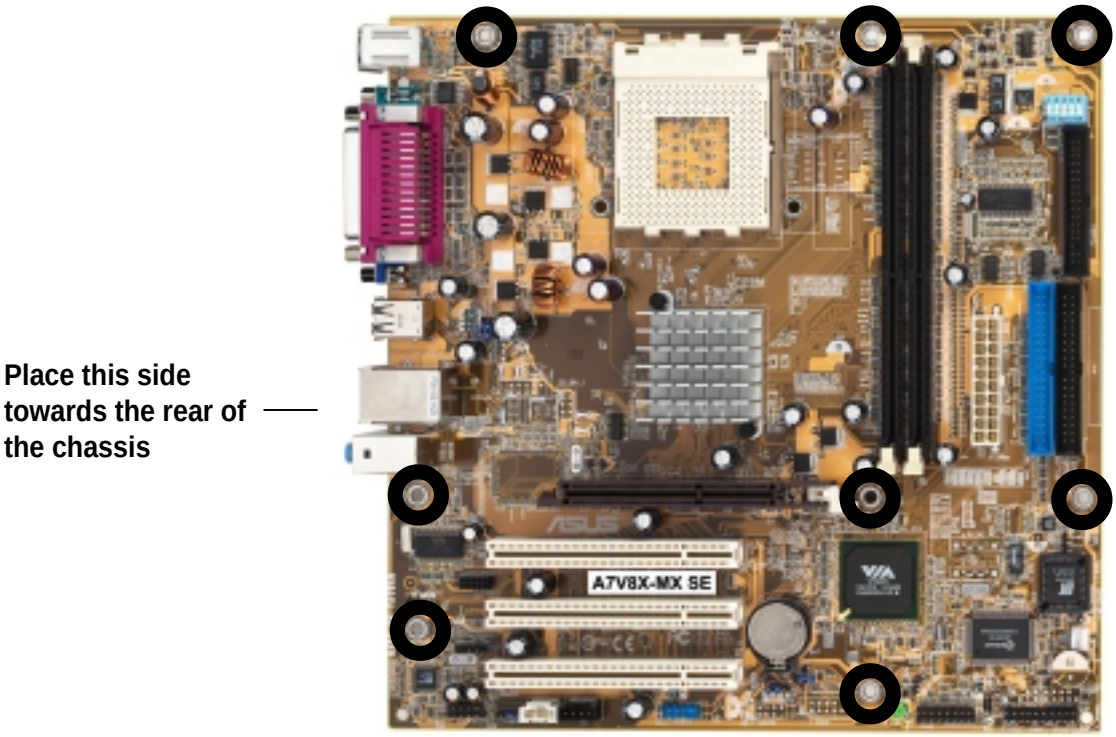
1.6.1 Placement direction

When installing the motherboard to the chassis, make sure to place it in the correct orientation. The edge with external ports goes to the rear part of the chassis as indicated in the image below. It may be more convenient to install major cables, the CPU and modular components before fixing the motherboard inside the case frame.

1.6.2 Screw holes

Place eight (8) screws into the holes indicated by circles to secure the motherboard to the chassis.

Do not overtighten the screws! Doing so may damage the motherboard.



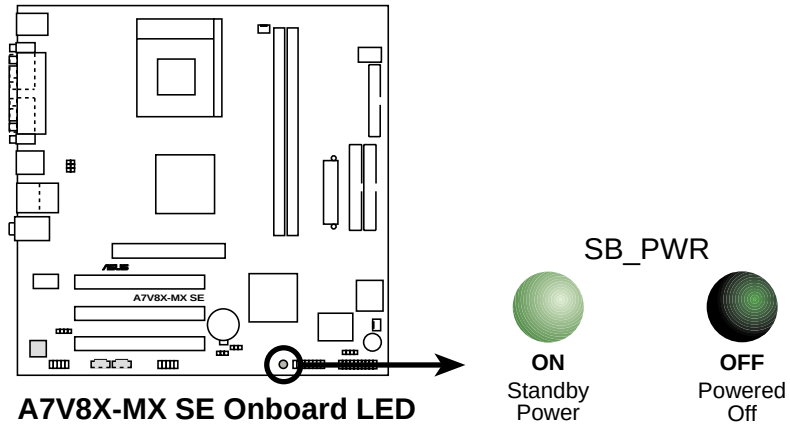
1.7 Before you proceed

Take note of the following precautions before you install motherboard components or change any motherboard settings.

1. Unplug the power cord from the wall socket before touching any component.
2. Use a grounded wrist strap or touch a safely grounded object or to a metal object, such as the power supply case, before handling components to avoid damaging them due to static electricity.
3. Avoid touching the ICs on components.
4. Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that came with the component.
5. **Before you install or remove any component, ensure that the ATX power supply is switched off or the power cord is detached from the power supply.** Failure to do so may cause severe damage to the motherboard, peripherals, and/or components.

Onboard LED

The A7V8X-MX SE motherboard comes with a standby power LED. When lit, this green LED (SB_PWR) indicates that the system is ON, in sleep mode, or in soft-off mode, a reminder that you should shut down the system and unplug the power cable before removing or plugging in any motherboard component.

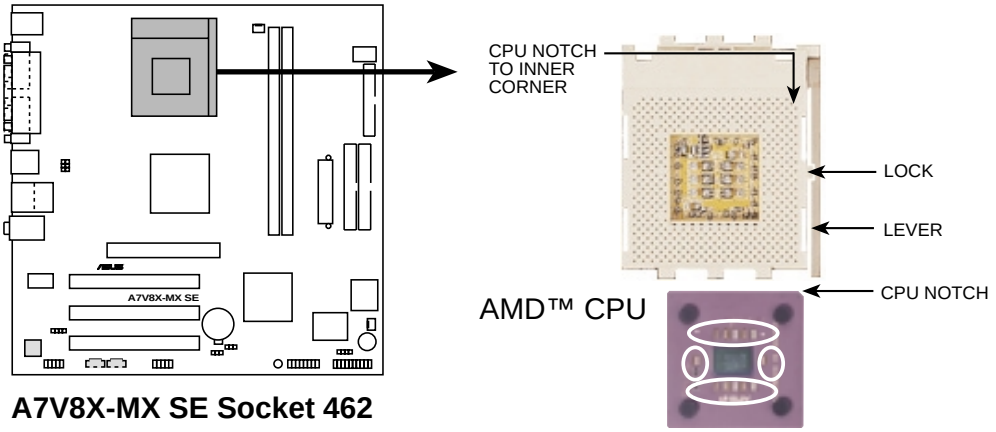


A7V8X-MX SE Onboard LED

1.8 Central Processing Unit (CPU)

The motherboard provides a Socket A (462) for CPU installation. The A7V8X-MX SE supports Athlon™ XP processors with “QuantiSpeed” data processing, large data caches, 3D enhancements and 333/266/200MHz bus speeds. AMD Athlon™ XP processors offer gigahertz speeds to support all the latest computing platforms and applications.

This motherboard does not support AMD processors with less than 1GHz core speed.



A7V8X-MX SE Socket 462

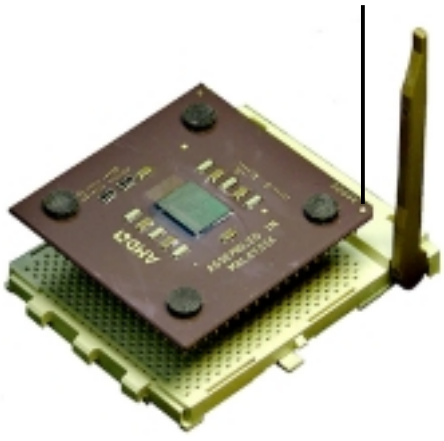
Each AMD CPU has a “marked” corner. This corner is usually indicated with a notch, and/or a golden square or triangle. Refer to this indicator while orienting the CPU. A fan and heatsink should be attached to the CPU to prevent overheating.

Installing the CPU

Follow these steps to install a CPU:

1. Locate the Socket 462 and open it by pulling the lever gently sideways away from the socket. Then lift the lever upwards. The socket lever must be fully opened (90 to 100 degrees).
2. Insert the CPU with the correct orientation. The ***notched or golden corner*** of the CPU must be oriented toward the inner corner of the socket base nearest to the lever hinge.

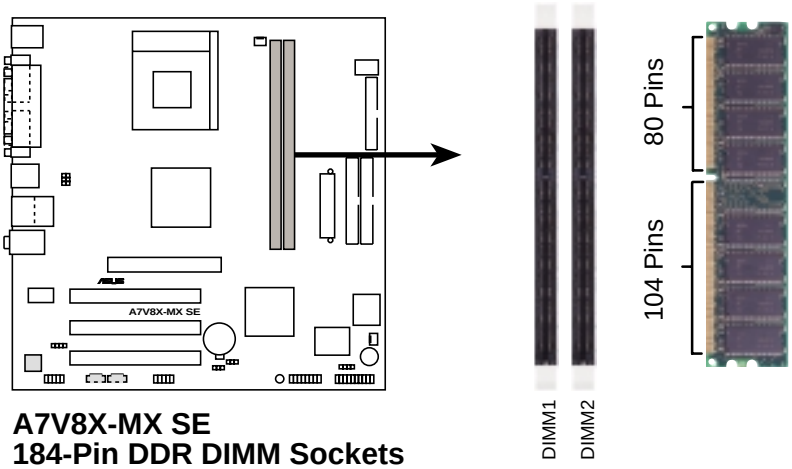
Golden corner



The CPU should drop easily into place. ***Do not force the CPU*** into the socket to avoid bending the pins. If the CPU does not fit, check its alignment and look for bent pins.

1.9 System memory

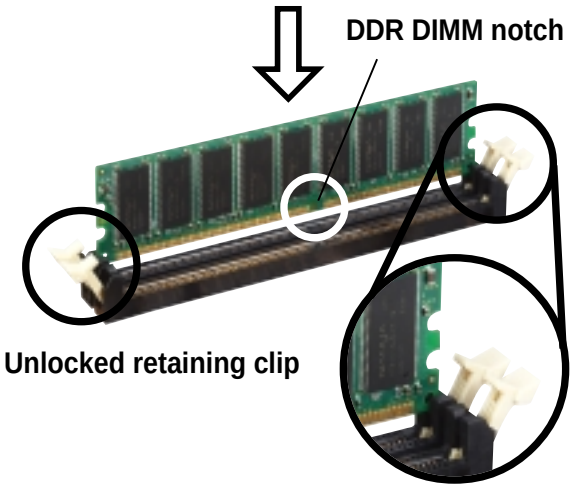
The motherboard has two Double Data Rate (DDR) DIMM sockets that supports up to 2GB non-ECC PC2700/2100/1600 DDR SDRAM DIMMs. Each DIMM socket is double-sided. DIMMs come in combinations of single or double-sided types ranging through 64MB, 128MB, 256MB, 512MB, and 1 GB.



A7V8X-MX SE
184-Pin DDR DIMM Sockets

Installing a DIMM

1. Unlock a DIMM socket by pressing the retaining clips outward.
2. Align a DIMM on the socket. Make sure the notches on the DIMM exactly match the notches in the socket.
3. Firmly insert the DIMM into the socket until the retaining clips lock into place.



A DDR DIMM is keyed with a notch so that it fits in only one direction. DO NOT force a DIMM into a socket to avoid damaging the DIMM.

1.10 Expansion slots

The A7V8X-MX SE motherboard has three (3) PCI slots and one (1) Accelerated Graphics Port (AGP). The following sub-sections describe the slots and the expansion cards that they support.

1.10.1 Configuring an expansion card

Some expansion cards need an IRQ to operate. Generally, an IRQ must be exclusively assigned to one function at a time. In a standard design configuration, 16 IRQs are available but most are already in use.

Normally, 6 IRQs are free for expansion cards. Sometimes IRQs are “shared” by more than one function; in this case, IRQ assignments are swapped automatically or adjusted through the BIOS firmware.

Standard Interrupt Assignments

IRQ	Standard Function
0	System Timer
1	Keyboard Controller
2	Programmable Interrupt Controller
3*	USB Universal Host Controller
4*	Communications Port (COM1)
5*	Onboard Audio
6	Standard Floppy Disk Controller
7*	Printer Port (LPT1)
8	System CMOS/Real Time Clock
9*	Onboard LAN
10*	USB Universal Host Controller
11*	Onboard VGA
12*	PS/2 Compatible Mouse Port
13	Numeric Data Processor
14*	Ultra ATA Controller
15*	Secondary Ultra ATA Controller

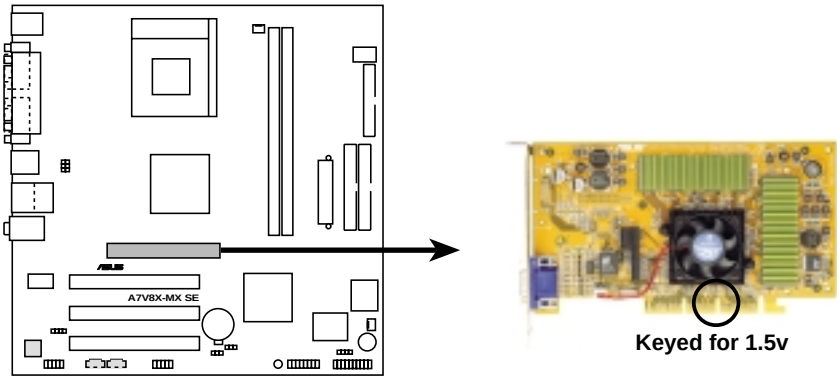
* These IRQs are usually available for ISA or PCI devices.

IRQ assignments for this motherboard

	A	B	C
PCI slot 1	shared	––	––
PCI slot 2	––	shared	––
PCI slot 3	––	––	shared
AGP slot	shared	––	––

1.10.2 AGP slot

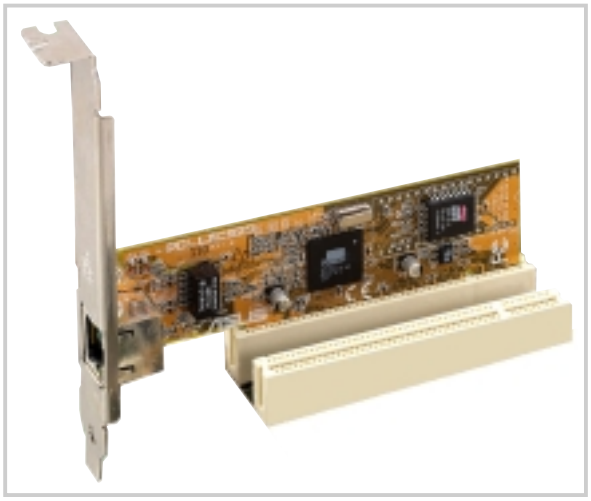
This motherboard has an Accelerated Graphics Port (AGP) slot that supports +0.8V and +1.5V AGP 8X cards. Note the notches on the card golden fingers to ensure that they fit the AGP slot on your motherboard.



A7V8X-MX SE Accelerated Graphics Port (AGP)

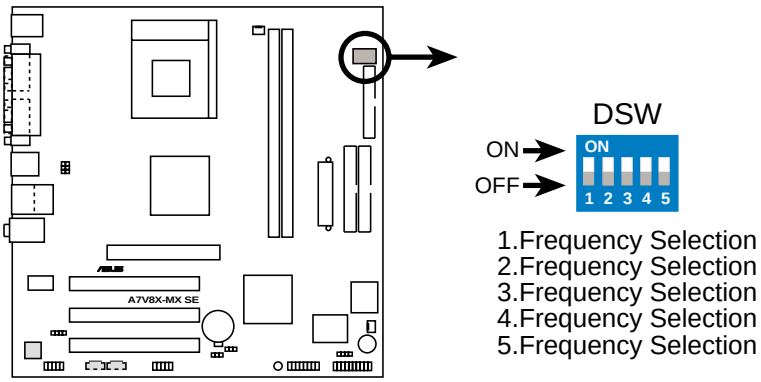
1.10.3 PCI slots

Three 32-bit PCI slots are available on this motherboard. The slots support PCI cards such as LAN card, SCSI card, USB card, and other cards that comply with PCI specifications. This figure shows a typical PCI card installed into a slot:



1.11 Switch and jumpers

The motherboard frequency is adjusted through the DIP switches. The white block represents the switch position. The illustration below shows the ON and OFF positions of the switches.



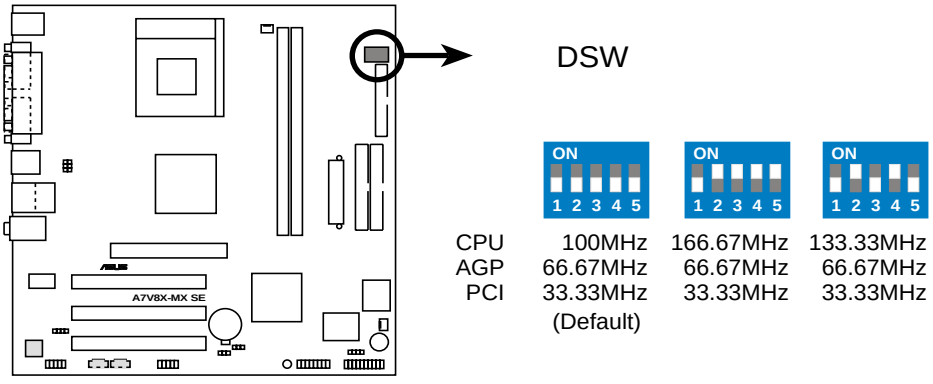
A7V8X-MX SE DIP Switches

The option to set the CPU core bus frequency multiple is available only on unlocked CPUs. If you are using a locked CPU, setting the switches does not produce any effect.

1. CPU external frequency selection (SW1 Switches 1-5)

This option tells the clock generator what frequency to send the CPU. This allows the selection of the CPU's external frequency (or Bus Clock). The BUS Clock multiplied by the Frequency Multiple equals the CPU's internal frequency (the advertised CPU speed).

The default CPU external frequency is 100MHz. If your CPU supports 133/166MHz external frequency, adjust the DSW settings before installing the motherboard to the chassis.



A7V8X-MX SE CPU External Frequency Selection

Set the CPU frequency only to the recommended settings. Frequencies other than the recommended CPU bus frequencies are not guaranteed to be stable.

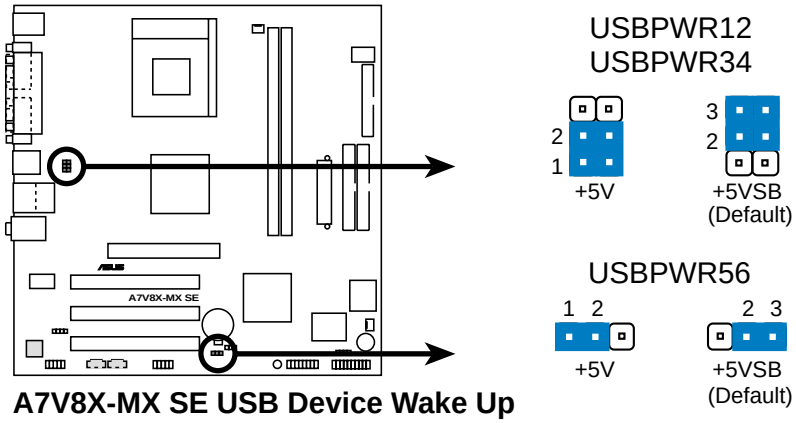
2. USB device wake-up (3-pin USBPW12, USBPW34, USBPW56)

Set these jumpers to +5V to wake up the computer from S1 sleep mode (CPU stopped, DRAM refreshed, system running in low power mode) using the connected USB devices. Set to +5VSB to wake up from S3 sleep mode (no power to CPU, DRAM in slow refresh, power supply in reduced power mode). Both jumpers are set to pins 1-2 (+5V) by default because not all computers have the appropriate power supply to support this feature.

The USBPW12 and USBPW34 jumpers are for rear USB ports. USBPW56 is for the internal USB header that you can connect to front USB ports.

The USB device wake-up feature requires a power supply that can provide 500mA on the +5VSB lead for each USB port. Otherwise, the system does not power up.

The total current consumed must NOT exceed the power supply capability (+5VSB) whether under normal condition or in sleep mode.



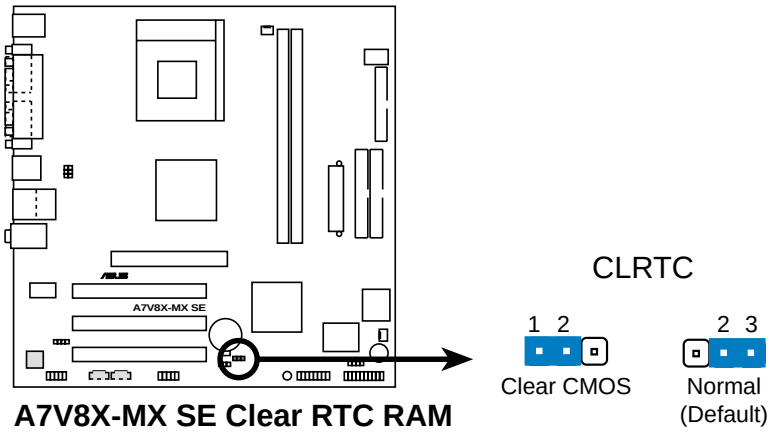
A7V8X-MX SE USB Device Wake Up

3. Clear RTC RAM (CLRTC)

This jumper clears the Real Time Clock (RTC) RAM of date, time and system setup parameters in CMOS. The RAM data in CMOS is powered by the onboard button cell battery.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Remove the battery.
3. Move the jumper caps from [2-3] to [1-2] momentarily. Replace the jumper cap to the original position, [2-3].
4. Re-install the battery.
5. Plug the power cord and turn ON the computer.
6. Hold down the <Del> key during the boot process and enter BIOS setup to re-enter data.



A7V8X-MX SE Clear RTC RAM

1.12 Connectors

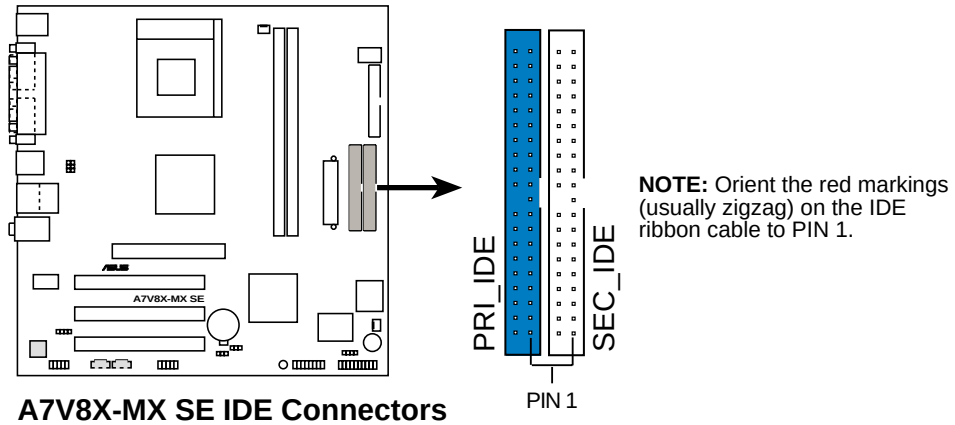
This section describes and illustrates the connectors on the motherboard.

1. IDE connectors (40-1 pin PRI_IDE, SEC_IDE)

This connector supports the provided UltraATA133 IDE hard disk ribbon cable. Connect the cable's blue connector to the primary (recommended) or secondary IDE connector, then connect the gray connector to the UltraATA133 slave device (hard disk drive) and the black connector to the UltraATA133 master device.

Pin 20 on each IDE connector is removed to match the covered hole on the UltraATA133 cable connector. This prevents incorrect orientation when you connect the cables.

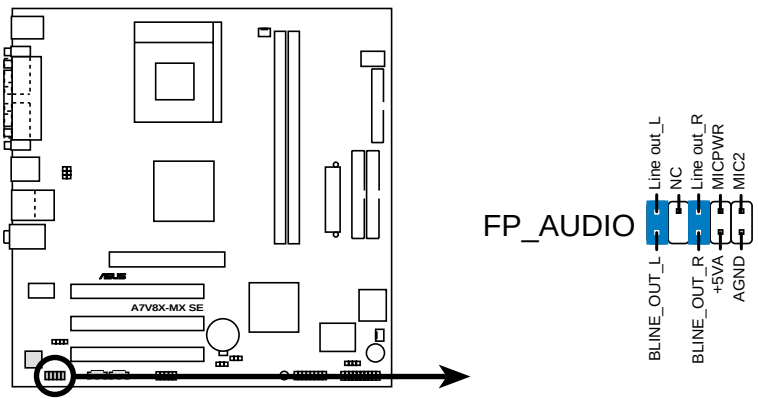
For UltraATA133 IDE devices, use 40-pin 80-conductor cable.



A7V8X-MX SE IDE Connectors

2. Front panel audio connectors (10-1 pin FPAUDIO)

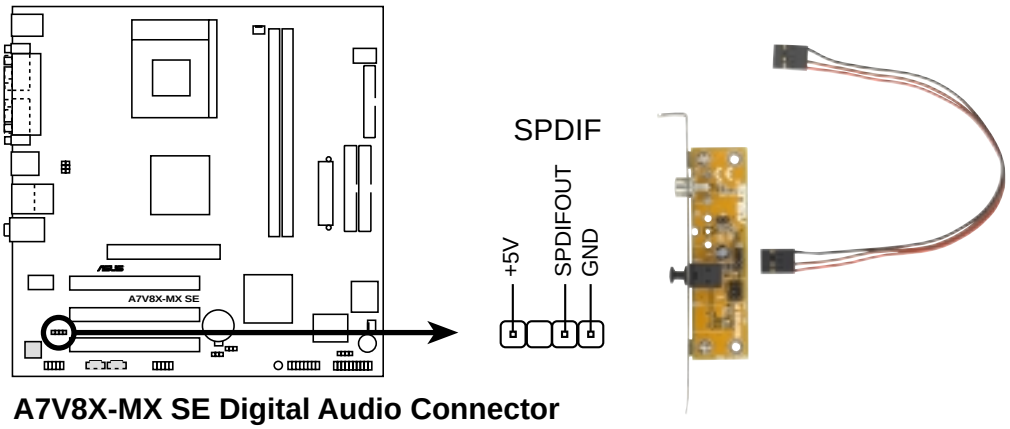
This is an interface for front panel audio cable that allows convenient connection and control of audio devices.



A7V8X-MX SE Front Panel Audio Connector

3. Digital audio connector (4-1 pin SPDIF)

This connector is for an optional S/PDIF audio module that allows digital instead of analog sound input and output.

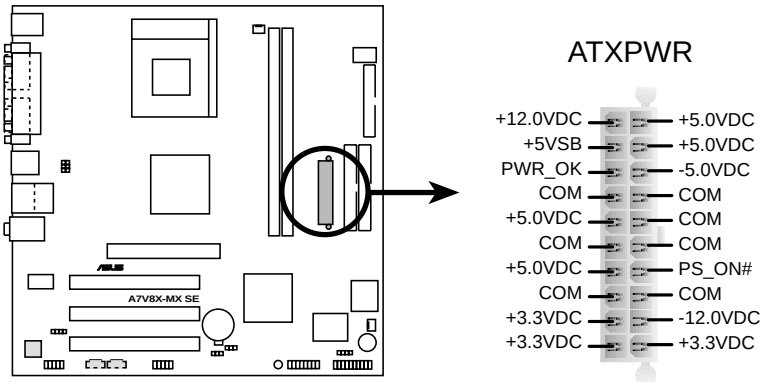


A7V8X-MX SE Digital Audio Connector

- When you input sound for S/PDIF IN, the LINE_OUT will output the sound. Mute LINE_OUT to impede sound output from S/PDIF IN.
- The S/PDIF module is purchased separately.

4. ATX power connectors (20-pin ATXPWR)

These connectors connect to an ATX 12V power supply. The plugs from the power supply are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit.

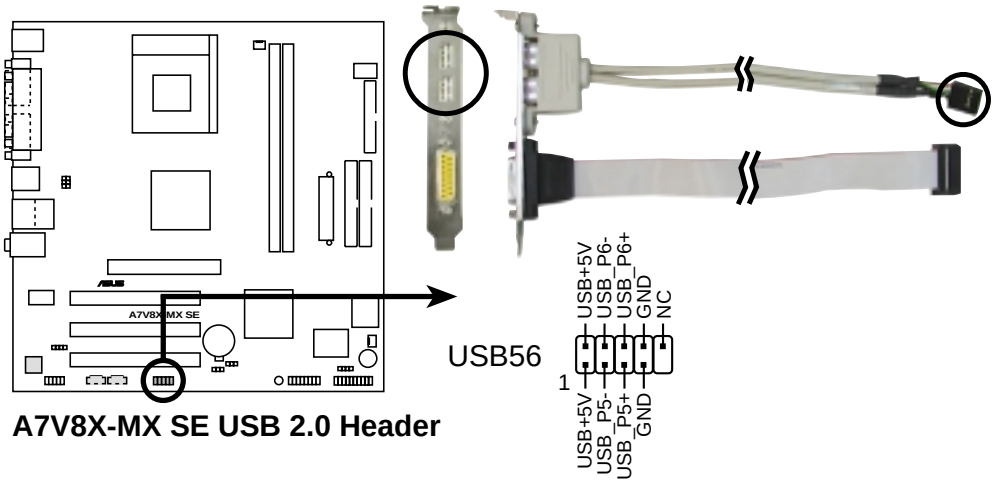


A7V8X-MX SE ATX Power Connector

If you will need to replace the power supply in the future, make sure that your new ATX 12V power supply can provide 8A on the +12V lead and at least 1A on the +5-volt standby lead (+5VSB). The minimum recommended wattage is 230W, or 300W for a fully configured system. The system may become unstable and may experience difficulty powering up if the power supply is inadequate.

5. USB header (10-1 pin USB56)

If the USB 2.0 port connectors on the back panel are inadequate, a USB header is available for two additional USB ports. Connect a 2-port USB/GAME module cable to this connector, then mount the module to an open slot in the chassis.

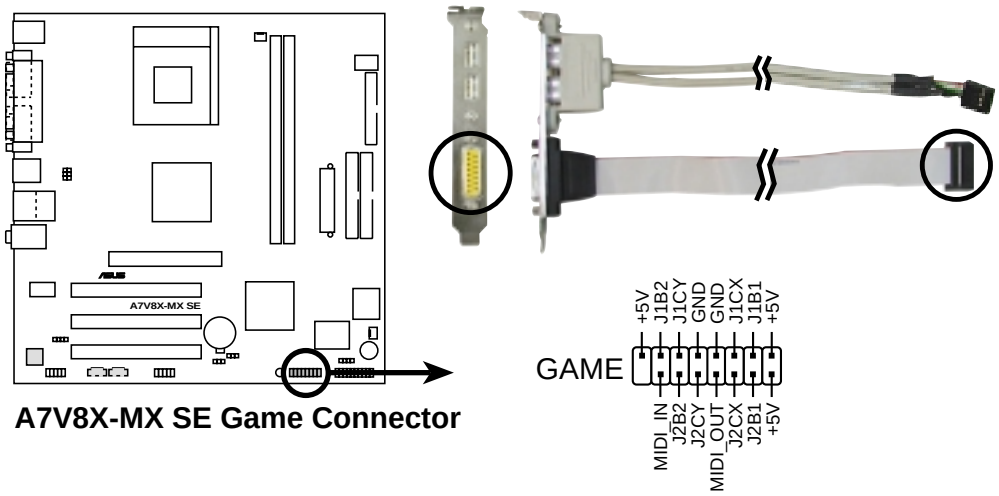


A7V8X-MX SE USB 2.0 Header

The USB/GAME module is purchased separately.

6. GAME/MIDI connector (16-1 pin GAME)

This connector supports a GAME/MIDI module. If your package came with an optional USB/GAME module, connect the module cable to this connector. The GAME/MIDI port on the module connects a joystick or a game pad for playing games, and MIDI devices for playing or editing audio files.

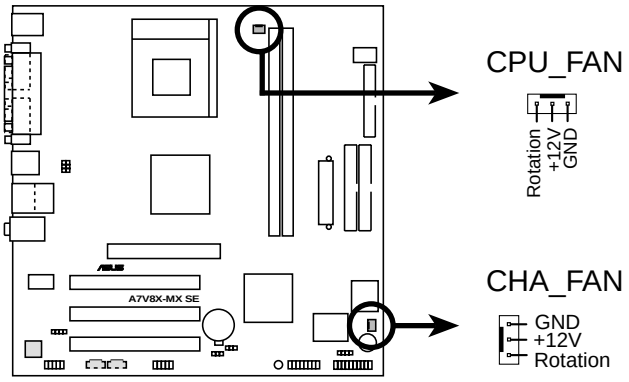


A7V8X-MX SE Game Connector

The USB/GAME module is purchased separately.

7. CPU and chassis fan connectors (3-pin CPU_FAN, CHA_FAN)

The fan connectors support cooling fans of 350mA ~ 740mA (8.88W max). Connect the fan cables to the fan connectors on the motherboard, making sure that the black wire of each cable matches the ground pin of the connector.



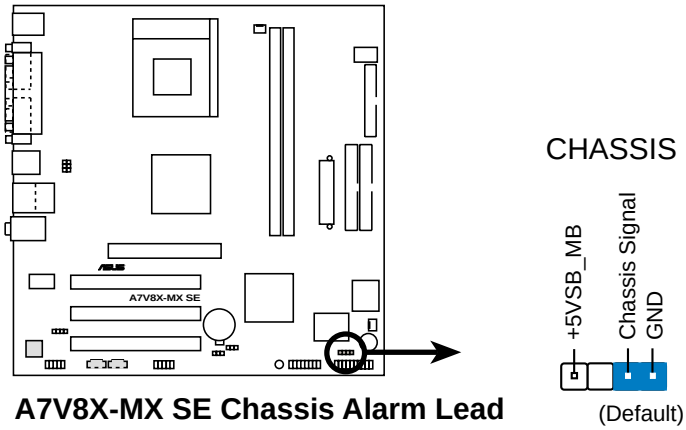
A7V8X-MX SE 12-Volt Fan Connectors

Do not forget to connect the fan cables to the fan connectors. Lack of sufficient air flow within the system may damage the motherboard components. These are not jumpers! DO NOT place jumper caps on the fan connectors!

8. Chassis intrusion connector (4-1 pin CHASSIS)

This lead is for a chassis designed with intrusion detection feature. This requires an external detection mechanism such as a chassis intrusion sensor or microswitch. When you remove any chassis component, the sensor triggers and sends a high-level signal to this lead to record a chassis intrusion event.

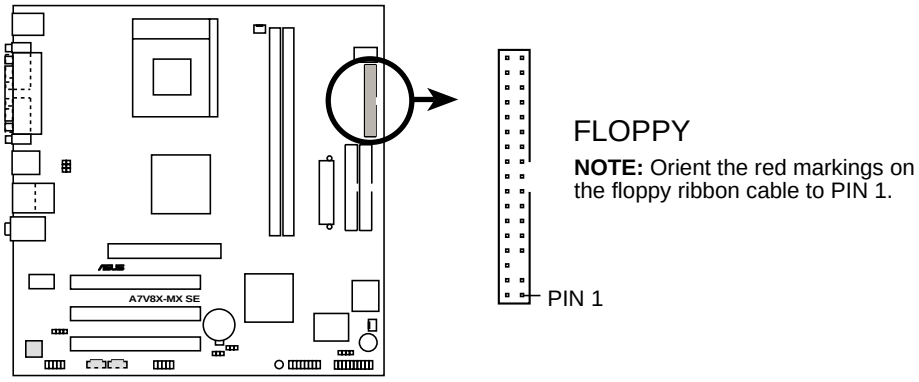
By default, the pins labeled “Chassis Signal” and “Ground” are shorted with a jumper cap. If you wish to use the chassis intrusion detection feature, remove the jumper cap from the pins.



A7V8X-MX SE Chassis Alarm Lead

9. Floppy disk drive connector (34-1 pin FLOPPY)

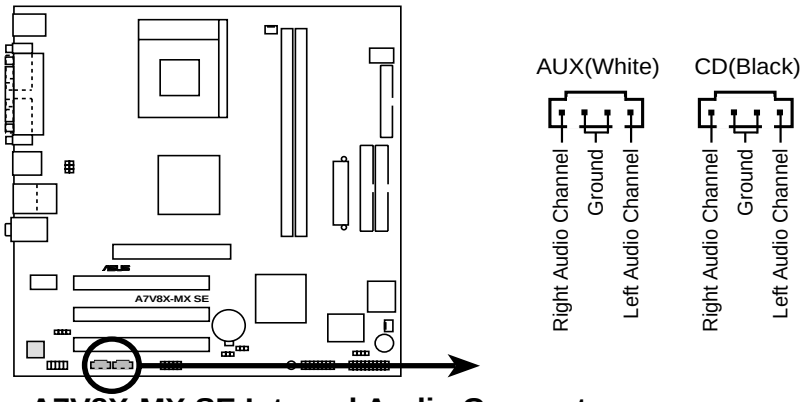
This connector supports the provided floppy drive ribbon cable. After connecting one end to the motherboard, connect the other end to the floppy drive. (Pin 5 is removed to prevent incorrect insertion when using ribbon cables with pin 5 plug.)



A7V8X-MX SE Floppy Disk Drive Connector

10. Internal audio connectors (4-pin CD, AUX)

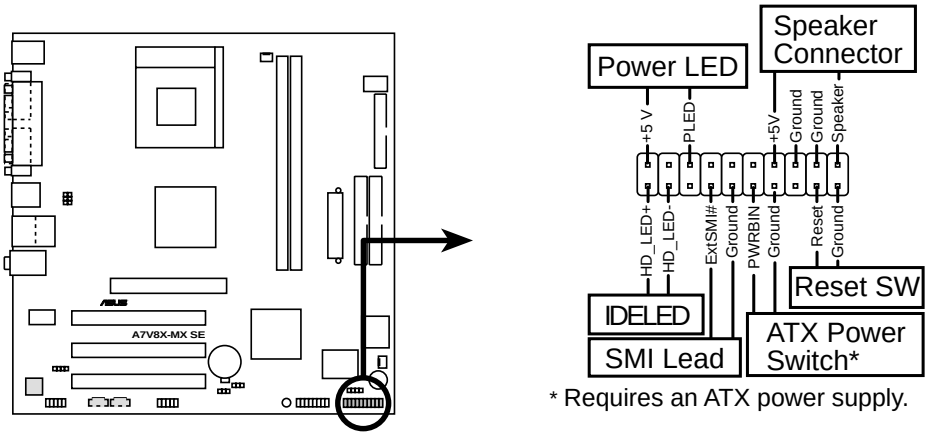
These connectors allow you to receive stereo audio input from sound sources such as a CD-ROM, TV tuner, or MPEG card.



A7V8X-MX SE Internal Audio Connectors

11. System panel connector (20-pin PANEL)

This connector accommodates several system front panel functions.



A7V8X-MX SE System Panel Connectors

- **System Power LED Lead (3-1 pin PLED)**

  This 3-1 pin connector connects to the system power LED. The LED lights up when you turn on the system power, and blinks when the system is in sleep mode.

- **System Warning Speaker Lead (4-pin SPEAKER)**

  This 4-pin connector connects to the case-mounted speaker and allows you to hear system beeps and warnings.

- **System Management Interrupt Lead (2-pin SMI)**

  This 2-pin connector allows you to manually place the system into a suspend mode, or “green” mode, where system activity is instantly decreased to save power and to expand the life of certain system components. Attach the case-mounted suspend switch to this 2-pin connector.

- **Reset Switch (2-pin RESET)**

  This 2-pin connector connects to the case-mounted reset switch for rebooting the system without turning off the power switch.

- **ATX Power Switch/Soft-Off Switch Lead (2-pin PWR)**

  This connector connects a switch that controls the system power. Pressing the power switch turns the system between ON and SLEEP, or ON and SOFT OFF, depending on the BIOS or OS settings. Pressing the power switch while in the ON mode for more than 4 seconds turns the system OFF.

- **Hard Disk Activity Lead (2-pin IDE LED)**

  This connector supplies power to the hard disk activity LED. The read or write activities of any device connected to the primary or secondary IDE connector cause this LED to light up.

Chapter 2

This chapter tells how to change system settings through the BIOS Setup Menus. Detailed descriptions of the BIOS parameters are also provided.

BIOS information

2.1 Managing and updating your BIOS

- The **original BIOS file** for this motherboard is in the support CD.
- Copy the original BIOS to a **bootable floppy disk** in case you need to restore the BIOS in the future.

2.1.1 Creating a bootable floppy disk

1. Do either one of the following to create a bootable floppy disk.

DOS environment

Insert a 1.44 MB floppy disk into the drive. At the DOS prompt, type:

format a: /s , then press the <Enter> key

Windows® 98SE/ME environment

a. From your Windows desktop, click **Start**, point to **Settings**, then click **Control Panel**.

b. Double-click **Add/Remove Programs** icon from the Control Panel window.

c. Click on the **Startup Disk** tab, then on **Create Disk...** button.

d. Insert a 1.44 MB floppy disk when prompted. Follow the suceeding screen instructions to complete the process.

Windows® XP environment

a. Insert a new 1.44 MB floppy disk in the floppy disk drive.

b. From the Windows desktop, click **Start** > **My Computer**.

c. In the **My Computer** window, click the **3 1/2 Floppy** icon.

d. From the Menu bar, click **File** > **Format.**

e. Select "**Create an MS-DOS Startup Disk**" in the **Format Options** field, then click **Start**.

2. Copy the original (or the latest) motherboard BIOS to the bootable floppy disk.